SPANNING TREE WITH RAPID
PROPAGATION OF TOPOLOGY CHANGES

ABSTRACT

[0081]   Modifications to the spanning tree algorithm allow bad news to propagate quickly by providing that protocol entities on bridges process inferior information sent by the designated bridge for each LAN. In addition, bridges use per port hello timers to stimulate information propagation, setting it to suit local link characteristics. No changes to the format of bridge protocol data units (BPDUs) as specified in the IEEE Standard 802.1D are required, and the algorithm for computing the topology of the network remains unchanged. Techniques have been adopted for expiring information and recomputing the spanning tree upon detection of link failure, upon receipt of a message having a message age greater than its accompanying maximum age, or if the port hello time algorithm detects a loss of link. Rules for propagating information are provided allowing rapid propagation of changes. Finally, techniques for burning out information in a configuration message are adopted.